ABSTRACT

Various high speed modem embodiments are provided, for example, having a receiver configured to receive an analog data signal over a telephone line from a first modem, from which digitized analog data signal samples are generated by a processor employing a linear

5   coding process using, for example, a sampling rate of at least 16 kHz with an 8 bits/sample. Following, the digitized analog data signal samples are transmitted over one or more digital lines of a first time division multiplexed bus to a second modem, which may be a digital loop carrier modem, for example. Thereafter, the second modem may demodulate the digitized analog data signal samples to generate digitized data, which may then be transmitted over one

10   or more digital signal lines of a second time division multiplexed bus.